

TITLE

by

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DISSERTATION

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Approved by:

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This is a dedication.

“The fact that we live at the bottom of a deep gravity well, on the surface of a gas covered planet going around a nuclear fireball 90 million miles away and think this to be normal is obviously some indication of how skewed our perspective tends to be.”

— Douglas Adams, *The Salmon of Doubt: Hitchhiking the Galaxy One Last Time*

ABSTRACT

TITLE HERE

by

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Major: Physics

Degree: Doctor of Philosophy

Abstract here

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List of Symbols

Symbol	Description	Unit
E_F	Fermi energy	eV
σ	conductivity	μS
V_{bg}	backgate voltage	V
V_{ds}	drain voltage	V
I_{ds}	drain current	V
χ	electron affinity	V
μ_{H}	Hall mobility	$\text{cm}^2 \text{V}^{-1} \text{s}^{-1}$
μ_{FE}	field-effect mobility	$\text{cm}^2 \text{V}^{-1} \text{s}^{-1}$

List of Physical Constants

Symbol	Quantity	Value
k_B	Boltzmann's constant	$1.380\,66 \times 10^{-23} \text{ J K}^{-1}$
ϵ_0	dielectric constant	$8.854\,18 \times 10^{-12} \text{ A}^2 \text{ s}^4 \text{ kg}^{-1} \text{ m}^{-3}$
e	elementary charge	$1.602\,18 \times 10^{-19} \text{ C}$
eV	electron volt	$1.602\,18 \times 10^{-19} \text{ J}$
c	speed of light	$2.997\,92 \times 10^8 \text{ m s}^{-1}$
h	Planck's constant	$6.626\,07 \times 10^{-34} \text{ J s}$
\hbar	reduced Planck's constant	$1.054\,57 \times 10^{-34} \text{ J s } (h/2\pi)$
R_{K-90}	von Klitzing constant	$25\,812.807\,455\,55 \, \Omega$
m_e	electron mass	$9.109\,383 \times 10^{-31} \text{ kg}$

SB Schottky barrier

Chapter 1

Chapter Title

1.1 Section Title

Contents here¹ with Schottky barrier (SB).

References

- [1] Katsutoshi Fukuda, Kosho Akatsuka, Yasuo Ebina, Renzhi Ma, Kazunori Takada, Izumi Nakai, and Takayoshi Sasaki. Exfoliated nanosheet crystallite of cesium tungstate with 2d pyrochlore structure: Synthesis, characterization, and photochromic properties. *ACS Nano*, 2(8):1689–1695, 2008.

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